In re PATENT APPLICATION of

Inventor(s): Mills

Group Art Unit: 1754

App'n Ser. No.: 09/225,687

Examiner(s): Tsang for the Secret Committee

Filing Date: 01/06/1999

Title: INORGANIC HYDROGEN COMPOUNDS AND APPLICATIONS THEREOF

August 5, 2005

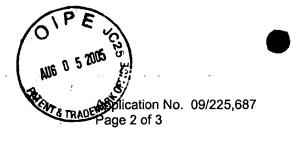
## NEW INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Attached are PTO/SB/O8B forms listing the enclosed documents. Copies of the enclosed documents are attached to the presently filed Information Disclosure Statement and/or to the Attachments to the Response filed herewith.

Applicant advises the Secret Committee that took over examination of his pending applications relating to his lower-energy hydrogen technology that Applicant has made a concerted effort to review those applications for documents cited therein and to make those documents of record in each case. Because, however, Applicant's lower-energy hydrogen applications were consolidated under a single Examiner, Bernard Eng-Kie Souw, Applicant believes that the Committee should already be familiar with the totality of these documents. Nonetheless, for purposes of completeness and ensuring that all cited documents have been brought to the PTO's attention, Applicant provides the following list of applications relating to his lower-energy hydrogen technology:



U.S. Ser. No.	Filing Date
10/513,026	11/01/04
10/494,571	5/6/04
10/469,913	9/5/2003
10/331,725	12/31/02
10/319,460	11/27/02
09/669,877	9/27/00
09/813,792	3/22/01
09/513,768	2/25/00
09/678,730	10/4/00
09/362,693	7/29/99
09/181,180	10/28/98
09/225,687	1/6/99
09/110,717	7/7/98
09/110,694	7/7/98
09/501,622	2/9/00
09/501,621	2/9/00
09/111,003	7/7/98
09/111,160	7/7/98
09/110,678	7/7/98
09/009,455	1/20/98
09/009,294	1/20/98
09/008,947	1/20/98
09/009,837	1/20/98
08/467,051	6/6/95
08/467,911	6/6/95
08/416,040	4/3/95
08/107,357	8/16/93
08/075,102	6/11/93
07/825,845	1/28/92
07/626,496	12/12/90
07/345,628	4/28/89
07/341,733	4/21/89

Application No. 09/225,687 Page 3 of 3

If necessary, please accept this Information Disclosure Statement under Rule 97(c) and charge the requisite Rule 17(p) fee to our Deposit Account No. 50-0687 under Order No. **62-226** for which purposes this paper is submitted in duplicate.

This Information Disclosure Statement is intended to fully comply with the rules, but should the Examiner find any part of its required content to have been omitted, prompt notice to that effect is earnestly solicited, along with additional time under Rule 97(f), to enable Applicant to fully comply.

Consideration of the foregoing remarks and enclosures, including return of a copy of the attached PTO/SB/08A and B forms with the Examiner's initials in the left column per MPEP § 609 and an early action on the merits of this application, are earnestly solicited.

Respectfully submitted, Manelli Denison & Selter PLLC

By

Jeffrey S. Melcher Reg. No.: 35,950

Tel. No.: (202) 261-1045 Fax. No.: (202) 887-0336

Customer No. 20736

					PTO/SB/08B (Modified)
Substitut	te for to TRADE PTO			Сотр	ete if Known
				Application Number	09/225,687
IN	FORMATION	DI	SCLOSURE	Filing Date	01/06/1999
S	TATEMENT E	BY A	APPLICANT	First Named Inventor	Mills
				Group Art Unit	1754
	(use as many sheets as necessary)			Examiner Name	Tsang
Sheet	1		12	Attorney Docket Number	62-226-1

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	r
Examine Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	58	R. L. Mills, "Classical Quantum Mechanics," Physics Essays, Vol. 16, No. 4, December, (2003), pp. 433-498. (Web Publication Date: May 23, 2002.)	
	60	R. L. Mills, J. Sankar, A. Voigt, J. He, B. Dhandapani, "Synthesis of HDLC Films from Solid Carbon," Journal of Materials Science, in press. (Web Publication Date: May 3, 2002.)	
	77	J. Phillips, R. L. Mills, X. Chen, "Water Bath Calorimetric Study of Excess Heat in 'Resonance Transfer' Plasmas," J. Appl. Phys., Vol. 96, No. 6, (2004) 3095–3102. (Web Publication Date: June 16, 2003.)	
	80	R. L. Mills, "The Fallacy of Feynman's Argument on the Stability of the Hydrogen Atom According to Quantum Mechanics," Annales de la Fondation Louis de Broglie, submitted. (Web Publication Date: Jan. 27, 2003.)	
·	81	R. Mills, P. Ray, B. Dhandapani, W. Good, P. Jansson, M. Nansteel, J. He, A. Voigt, "Spectroscopic and NMR Identification of Novel Hydride Ions in Fractional Quantum Energy States Formed by an Exothermic Reaction of Atomic Hydrogen with Certain Catalysts," European Physical Journal: Applied Physics, 28, (2004), 83–104. (Web Publication Date: Feb. 21, 2003.)	
	88	R. Mills, J. Sankar, A. Voigt, J. He, P. Ray, B. Dhandapani, "Role of Atomic Hydrogen Density and Energy in Low Power CVD Synthesis of Diamond Films," Thin Solid Films, 478, (2005) 77–90. (Web Publication Date: Dec. 22, 2003.)	
	94	R. L. Mills, "The Nature of the Chemical Bond Revisited and an Alternative Maxwellian Approach," Physics Essays, in press. (Web Publication Date: Aug. 6, 2003.)	
	96	J J. Phillips, C.K. Chen, R. L. Mills, "Evidence of the Production of Hot Hydrogen Atoms in RF Plasmas by Catalytic Reactions Between Hydrogen and Oxygen Species," Spectrochimica Acta Part B: Atomic Spectroscopy, submitted. (Web Publication Date: Sept. 12, 2003.)	
	97	R. L. Mills, P. Ray, B. Dhandapani, "Evidence of an Energy Transfer Reaction Between Atomic Hydrogen and Argon II or Helium II as the Source of Excessively Hot H Atoms in RF Plasmas," Journal of Plasma Physics, in press. (Web Publication Date: Sept. 26, 2003.)	
	98	R. L. Mills, Y. Lu, J. He, M. Nansteel, P. Ray, X. Chen, A. Voigt, B. Dhandapani, "Spectral Identification of New States of Hydrogen," New Journal of Chemistry, submitted. (Web Publication Date: Nov. 18, 2003.)	

		· · · · · · · · · · · · · · · · · · ·	
Examiner Signature	Date Considered		

12					PTO/SB/08B (Modified)
Substitute	PADEMARKS FOR 16H 1449B/PTO			Сотр	lete if Known
				Application Number	09/225,687
IN	FORMATION	DI	SCLOSURE	Filing Date	01/06/1999
ST	STATEMENT BY APPLICANT		First Named Inventor	Mills	
	(use as many she	ets a	s necessary)	Group Art Unit	1754
				Examiner Name	Tsang
Sheet	2		12	Attorney Docket Number	62-226-1

Funnina	C:4=	Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the						
Examine r Initials*	No. 1	include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>					
	100	R. Mills, B. Dhandapani, J. He, "Highly Stable Amorphous Silicon Hydride from a Helium Plasma Reaction," Materials Chemistry and Physics, submitted. (Web Publication Date: Nov. 17, 2003.)						
	101	R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Chemistry of Solid, Liquid, and Gaseous Fuels, 227th American Chemical Society National Meeting, March 28-April 1, 2004, Anaheim, CA.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
	102	R. L. Mills, "Exact Classical Quantum Mechanical Solutions for One- through Twenty- Electron Atoms," Phys. Essays, submitted. (Web Publication Date: April 22, 2004.)						
	103	R. L. Mills, Dhandapani, W. Good, J. He, "New States of Hydrogen Isolated from K <sub>2</sub> CO <sub>3</sub> Electrolysis Gases," Electrochim. Acta, submitted. ( <i>Web Publication Date: April 28, 2004.</i> )						
	104	R. L. Mills, Y. Lu, M. Nansteel, J. He, A. Voigt, W. Good, B. Dhandapani, "Energetic Catalyst-Hydrogen Plasma Reaction as a Potential New Energy Source," Division of Fuel Chemistry, Session: Advances in Hydrogen Energy, 228th American Chemical Society National Meeting, August 22–26, 2004, Philadelphia, PA.						
	113	R. Mills, "Physical Solutions of the Nature of the Atom, Photon, and Their Interactions to Form Excited and Predicted Hydrino States", New Journal of Physics, submitted.						
	114	R. Mills, K. Akhtar, B. Dhandapani, "Tests of Features of Field-Acceleration Models for the Extraordinary Selective H Balmer $\alpha$ Broadening in Certain Hydrogen Mixed Plasmas," Journal of Applied Physics, submitted. (web publication June 24, 2005, www.blacklightpower.com).						

Examiner	Date	
Signature	Considered	

	<u> </u>				PTO/SB/06B (Modified)
Substitute	PRADEMARY e for form 1449B/PTO			Сотр	lete if Known
				Application Number	09/225,687
INI	FORMATION	DI	SCLOSURE	Filing Date	01/06/1999
ST	TATEMENT E	BY A	APPLICANT	First Named Inventor	Mills
				Group Art Unit	1754
	(use as many she	ets a	s necessary)	Examiner Name	Tsang
Sheet	3		12	Attorney Docket Number	62-226-I

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
Examine r Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	105	J. Phillips, C. K. Chen, R. L. Mills, "Evidence of Catalytic Production of Hot Hydrogen in RF-Generated Hydrogen/Argon Plasmas," J. Appl. Physics, submitted. (Web Publication Date: September 7, 2004.)	
	106	R. L. Mills, "Exact Classical Quantum Mechanical Solution for Atomic Helium which Predicts Conjugate Parameters from a Unique Solution for the First Time," Foundations of Science, submitted. (Web Publication Date: October 28, 2004.)	
	107	R. L. Mills, "Maxwell's Equations and QED: Which is Fact and Which is Fiction," Physica Scripta, submitted. (Web Publication Date: October 28, 2004.)	
• • •	108	R. L. Mills, J. He, M. Nansteel, B. Dhandapani, "Catalysis of Atomic Hydrogen to New Hydrides as a New Power Source," International Journal of Global Energy Issues (IJGEI). Special Edition in Energy System, submitted. (Web Publication Date: April 4, 2005.)	
	109	R. L. Mills, M. Nansteel, J. He, B. Dhandapani, "Low-Voltage EUV and Visible Light Source Due to Catalysis of Atomic Hydrogen," J. Plasma Physics, submitted. (Web Publication Date: April 15, 2005.)	
· <u>-</u> · · ·	110	R. L. Mills, J. He, Z, Chang, W. Good, Y. Lu, B. Dhandapani, "Catalysis of Atomic Hydrogen to Novel Hydrides as a New Power Source," Prepr. Pap.—Am. Chem. Soc., Div. Fuel Chem. 2005, 50(2). (Web Publication Date: April 22, 2005.)	
	111	R. L. Mills, J. He, Z, Chang, W. Good, Y. Lu, B. Dhandapani, "Catalysis of Atomic Hydrog Novel Hydrogen Species H <sup>-</sup> (1/4) and H <sub>2</sub> (1/4) as a New Power Source," Thermochimica submitted. ( <i>Web Publication Date: May 6, 2005.</i> )	
	112	R. L. Mills, J. He, Y. Lu, Z, M. Nansteel, Chang, B. Dhandapani, "Comprehensive Identific and Potential Applications of New States of Hydrogen," Central European Journal of Physubmitted. (Web Publication Date: May 9, 2005.)	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	1 to 5	7			PTO/SB/08B (Modified)
Substitute	Substitute form 1449B			Сотр	lete if Known
				Application Number	09/225,687
INFORMATION DISCLOSURE		Filing Date	01/06/1999		
ST	STATEMENT BY APPLICANT			First Named Inventor	Mills
				Group Art Unit	1754
(use as many sheets as necessary)			s necessary)	Examiner Name	Tsang
Sheet	4	of	12	Attorney Docket Number	62-226-I

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		CRITCHLEY <i>et al</i> , "Energy shifts and forbidden transitions in H <sub>2</sub> due to electronic g/u symmetry breaking", <i>Molecular Physics</i> , 2003, Vol. 101, Nos. 4-5, pp. 651-661, Taylor & Francis Ltd.	
		GAMBUS et al., "Spectroscopic Study or Low-Pressure Water Plasmas and Their Reactions with Liquid Hydrocarbons", <i>Energy &amp; Fuels</i> , 2002, 16, pp. 172-176, American Chemical Society	
,		CVETANOVIC <i>et al.</i> , "Excessive Balmer line broadening in a plane cathode abnormal glow discharge in hydrogen", <i>Journal of Applied Physics</i> , 97, 033302 (2005), American Institute of Physics	
		AKATSUKA <i>et al.</i> , "Stationary population inversion of hydrogen in an arc-heated magnetically trapped expanding hydrogen-helium plasma jet", <i>Physical Review E</i> , 49, 2, pp. 1534-1544, February, 1994, The American Physical Society	
		MURAKAMI <i>et al.</i> , "Chemisorption of hydrogen into a graphite-potassium intercalation compound C <sub>8</sub> K studied by means of position annihilation", <i>J. Chem. Phys.</i> , 62 (10), May 15, 1995, American Institute of Physics	
		AHN, "Hydrogen Storage in Metal-Modified Single-Walled Carbon Nanotubes", Division of Engineering and Applied Science, California Institute of Technology, September 15, 2001	
		DUAN et al., "Numerical calculation of energies of some excited states in a helium atom", Eur. Phys. J., D 19, (2002), pp. 9-12, Societa Italiana di Fisica, Springer-Verlag 2002	
		NIXON et al., "Formation and structure of the potassium graphites", Brit. J. Appl. Phys., Ser. 2, Vol., 1, pp. 291-299, Great Britain, 2002	
		ZELLINGER, "Experiment and the foundations of quantum physics", Reviews of Modern Physics, Vol 71, No. 2, pp. S288-S297, Centenary 1999, The American Physical Society	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	3 Dis	<u>ો_</u>			PTO/SB/08B (Modified)	
Substitute for for 1014 148 RTG				Complete if Known		
	MAKU	•		Application Number	09/225,687	
IN	FORMATION	l DI	SCLOSURE	Filing Date	01/06/1999	
SI	TATEMENT I	BY A	APPLICANT	First Named Inventor	Mills	
				Group Art Unit	1754	
	(use as many sh	eets a	s necessary)	Examiner Name	Tsang	
Sheet	5	of	12	Attorney Docket Number	62-226-1	

•		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		COTTON et al, "Complexes of Cyclic 2-Oxacarbenes, I. A Spontaneous Cyclization to Form a Complex of 2-Oxaclyclopentylidene", Journal of the American Chemical Society, 93:11, pp. 2672-2676, June 2, 1971	
		LINDSAY <i>et al.</i> , "A remeasurement of the 2.4 $\mu$ m spectrum of $J = H_2$ pairs in a parahydrogen crystal", <i>Journal of Molecular Spectroscopy</i> , 218. Pp. 131-133, 2003	
		JUAREZ et al, "Photoelectron angular distributions of rotationally resolved states in para-H2+: A closer to the dynamics of molecular photoionisation", The University of Manchester Atomic, Molecular & Laser Manipulation Group, pp.1-5	
		WEISSTEIN, "Ortho-Para Hydrogen", http://scienceworld.wolfram.com/physics/Ortho-ParaHydrogen.html	
		SMITH, "Infrared spectra of BO₂- in the alkali halides-L. Potassium and rubidium halides", <i>Spectrochimica Acts</i> , Vol. 30A, pp. 875-882, Pergamon Press, 1974	
		LEITCH et al., "Raman Specreoscopy of Hydrogen Molecules in Crystalline Silicon", Physical Review Letters, 81:2, pp. 421-424, July 13, 1998, The American Physical Society	
		CHEN <i>et al.</i> , "Key to Understanding Interstitial H <sub>2</sub> in Si", <i>Physical Review Letters</i> , 88:10, pp. 105507-1 - 105507-4, March 11, 2002, The American Physical Society	
		CHEN et al., "Rotation of Molecular Hydrogen in Si: Unambiguous Identification of Ortho-H <sub>2</sub> and Para-D <sub>2</sub> ", <i>Physical Review Letters</i> , 88:24, pp. 245503-1 - 245503-4, June 17, 2002, The American Physical Society	
		LAVROV <i>et al.</i> , "Ortho and Para Interstitial $H_2$ in Silicon", <i>Physical Review Letters</i> , 89:21, pp. 215501-1 - 215501-4, November 18, 2002, The American Physical Society	
		STAVOLA <i>et al</i> , "Interstitial H <sub>2</sub> in Si: are all problems solved?", <i>Physica B</i> , pp. 58-66, 200s Elsevier B.V.	

	Doto	
Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

AUD U	5 2005 °S :				PTO/SB/08B (Modified)	
SUDSIAN	form 1449B/PTO			Complete if Known		
				Application Number	09/225,687	
INF	FORMATION	DI	SCLOSURE	Filing Date	01/06/1999	
	ATEMENT B			First Named Inventor	Mills	
				Group Art Unit	1754	
	(use as many she	ets a	s necessary)	Examiner Name	Tsang	
Sheet	6	of	12	Attorney Docket Number	62-226-I	

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		MILLS et al., "Catalysis of Atomic Hydrogen to Novel Hydrides as a New Power Source", pp. 1-8, BlackLight Power, Inc.	
		DECIUS et al, "Force Constants of the Metaborate Ion in Alkali Halides", The Journal of Chemical Physics, 56:10, pp. 5189-5190, May 15, 1972	
		"Infrared spectra of the metaborate ion in alkali halide solid solution", Research Notes, pp. 600-602	·
		SMITH, "Anharmonic force field of the metaborate ion in alkali halides", <i>The Journal of Chemical physics</i> , 58:11, pp. 4776-4778, June 1, 1973	
·		HISATSUNE et al., "Infrared Spectra of Metaborate Monomer and Trimer Ions", Inorganic Chemistry, pp. 168-174	
		JONES et al., "Force Constants of Nickel Carbonyl from Vibrational Spectra of Isotopic Species", <i>The Journal of Chemical Physics</i> , 48:6, pp. 2663-2670, March 15, 1968	
		SMITH, "Infrared spectra of BO₂-in the alkali halides-I. Potassium and rubidium halides", <i>Spectrochimica Acta</i> , 30A, pp. 875-882, 1974, Pergamon Press	
		SCHOENFELDER et al., "Kinetics of Thermal Decomposition of TiH <sub>2</sub> ", J. Vac. Sci. Technol., 10:5, pp. 862-870, Sept./Oct. 1973	
		"Emission Characteristics for Scandium Type Dispenser Cathodes", HeatWave Labs, Inc., TB-119, May 24, 2001, Spectra-Mat, Inc.	
		"Emission Characteristics of 'M Type' Dispenser Cathodes", HeatWave Labs, Inc., TB-117, May 24, 2001, Spectra-Mat, Inc.	
-		"Practical Aspects of Modern Dispenser Cathodes", <i>Microwave Journal</i> , September, 1979	

Examiner	Date		
Signature	Considered		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	TRADEMART			Complete if Known		
Substitute	e for form 1449B/PT0	J		Application Number	09/225,687	
INI	FORMATIC	N DI	SCLOSURE	Filing Date	01/06/1999	
			APPLICANT	First Named Inventor	Mills	
				Group Art Unit	1754	
	(use as many s	sheets a	s necessary)	Examiner Name	Tsang	
Sheet	7	of	12 -	Attorney Docket Number	62-226-1	

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>				
		"Standard Series Barium Tungsten Dispenser Cathodes", HeatWave Labs, Inc., TB-198, July 29, 2002, Spectra-Mat, Inc.					
		ABATE et al., "Optimization and enhancement of H ions in a magnetized sheet plasma", Review of Scientific Instruments, 71:10, pp. 3689-3695, October 2000, American Institute of Physics					
		CHABERT <i>et al.</i> , "On the influence of the gas velocity on dissociation degree and gas temperature in a flowing microwave hydrogen discharge", <i>Journal of Applied Physics</i> , 84:1, pp. 161-167, July 1, 1009, American Institute of Physics					
		GORDON et al., "Energy coupling efficiency of a hydrogen microwave plasma reactor", Journal of Applied Physics, 89:3, pp. 1544-1549, February 1, 2001, American Institute of Physics					
		RADOVANOV et al., "Time-resolved Balmer-alpha emission from fast hydrogen atoms in low pressure, radio-frequency discharges in hydrogen", Appl. Phys. Lett., 66:20, pp. 2637-2639, May 15, 2995					
		DJUROVIC et al., "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American Institute of Physics					
		KONJEVIC, "Plasma Broadening and Shifting of Non-Hydrogenic Spectral Lines: Present Status and Applications", <i>Physics Reports</i> , 315, pp. 339-401, 1999, Elsevier					
		BENESCH et al., "Line shapes of atomic hydrogen in hollow-cathode discharges", Optics Letters, 9:8, pp. 338-340, August 1984, Optical Society of America					
		AYERS, et al., "Shapes of atomic-hydrogen lines produced at a cathode surface", Physical Review A, 37:1, pp. 194-200, January 1, 1988, The American Physical Society					
		ADAMOV, et al., "Doppler Spectroscopy of Hydrogen and Deuterium Balmer Alpha Line in an Abnormal Glow Discharge", <i>IEEE Transactions on Plasma Science</i> , 31:3, pp. 444-454, June 3, 2003					
Examiner Signature		Date Considered					

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	te for form 1449B/PT	<u> </u>		Complete if Known		
Substitut	e 101 101111 1449B/P10	J		Application Number	09/225,687	
IN	FORMATIC	N DI	SCLOSURE	Filing Date	01/06/1999	
			APPLICANT	First Named Inventor	Mills	
				Group Art Unit	1754	
	(use as many s	sheets a	s necessary)	Examiner Name	Tsang	
Sheet	8	of	12	Attorney Docket Number	62-226-I	

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		JOVICEVIC et al., "Excessive Balmer line broadcasting in microwave-induced discharges", Journal of Applied Physics, 95:1, pp. 24-29, January 1, 2004, American Institute of Physics	
		DJUROVIC et al., "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American Institute of Physics	
		MAYO, "Thermalization and Energy Distribution in Cold Laboratory Plasmas Comments on the Possibility of Mono-Energetic Species", April 20, 2004	
		VIDENOVIC <i>et al.</i> , "Spectroscopic investigations of a cathode fall region of the Grimm-type glow discharge", <i>Spectrochimica Acta Part B</i> , 51, pp. 1707-1731, 1996	
		BARBEAU et al., "Spectroscopic investigation of energetic atoms in a DC hydrogen flow discharge, pp. 1168-1174, 1990 IOP Publishing Ltd.	
		KONJEVIC <i>et al.</i> , "Emission Spectroscopy of the Cathode Fall Region of an Analytical Glow", <i>J. Phys. IV France</i> , 7, pp. C4-247-C4-258, October 1997	
		LIFSHITZ et al., "Resonance absorption measurements of atom concentrations in reacting gas mixtures. I. Shapes of H and D Lyman-α lines from microwave sources", <i>J. Chem. Phys.</i> , 70:12, pp. 5607-5613, June 15, 1979, American Institute of Physics	
		KURAICA et al., "Line shapes of atomic hydrogen in a planecathode abnormal glow discharge", <i>Physical Review A</i> , 46:7, pp. 4429-4432, October 1, 1992, The American Physical Society	
		KURAICA et al., "On the Atomic Hydrogen Line Shapes in a Plane-Cathode Obstructed Glow Discharge", <i>Physica Scripta.</i> , 50, pp. 487-492, 1994	

	Examiner	Date	"
Signature   Considered	Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	e for form 1449B/PTO	)		Complete if Known		
Cubsilial	C 101 101111 14435/1 1 C	,		Application Number	09/225,687	
IN	FORMATIO	N DI	SCLOSURE	Filing Date	01/06/1999	
			APPLICANT	First Named Inventor	Mills	
				Group Art Unit	1754	
(use as many sheets as necessary)				Examiner Name	Tsang	
Sheet	9	of	12	Attorney Docket Number	62-226-1	

		Ι
Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	OLTHOFF et al., "Studies of Ion Kinetic-Energy Distributions in the Gaseous Electronics Conference RF Reference Cell", Journal of Research of the National Institute of Standards and Technology, 100:4, pp. 383-400, July-August 1995	
	RADOVANOV <i>et al.</i> , "Ion kinetic-energy distributions and Balmer-alpha ( $H_{\alpha}$ ) excitation in Ar- $H_2$ radio-frequency discharges", <i>J. Appl. Phys.</i> , 78:2, pp. 746-756, July 15, 1995	
	DJUROVIC et al., "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American institute of Physics	
	ALEXEFF et al., "Collisionless Ion-Wave Propagation and the Determination of the Compressions Coefficient of Plasma Electrons", <i>Physical Review Letters</i> , 15:7, pp. 286-288, August 16, 1999	
	ARATA et al., "Reproducible 'Cold' Fusion Reaction Using a Complex Cathode", Fusion Technology, 22, pp. 287-295, September 1992	
	BURKHOLDER <i>et al.</i> , "Reactions of boron atoms with molecular oxygen. Infrared spectra of BO, BO2, B2O2, B2O3, and BO2 in solid argon", <i>J. Chem. Phys.</i> , 95:12, pp. 8697-8709, December 15, 1991	
	SPURGIN, "Direct Conversion of the Random Thermal Energy of a Plasma Into Electrical Energy", Master's Thesis, The University of South Florida, June 1972	
	No. <sup>1</sup>	DLTHOFF <i>et al.</i> , "Studies of Ion Kinetic-Energy Distributions in the Gaseous Electronics Conference RF Reference Cell", <i>Journal of Research of the National Institute of Standards and Technology</i> , 100:4, pp. 383-400, July-August 1995  RADOVANOV <i>et al.</i> , "Ion kinetic-energy distributions and Balmer-alpha (H <sub>α</sub> ) excitation in Ar-H₂ radio-frequency discharges", <i>J. Appl. Phys.</i> , 78:2, pp. 746-756, July 15, 1995  DJUROVIC <i>et al.</i> , "Hydrogen Balmer alpha line shapes for hydrogen-argon mixtures in a low-pressure rf discharge", <i>J. Appl. Phys.</i> , 74:11, pp. 6558-6565, December 1, 1993, American institute of Physics  ALEXEFF <i>et al.</i> , "Collisionless Ion-Wave Propagation and the Determination of the Compressions Coefficient of Plasma Electrons", <i>Physical Review Letters</i> , 15:7, pp. 286-288, August 16, 1999  ARATA <i>et al.</i> , "Reproducible 'Cold' Fusion Reaction Using a Complex Cathode", <i>Fusion Technology</i> , 22, pp. 287-295, September 1992  BURKHOLDER <i>et al.</i> , "Reactions of boron atoms with molecular oxygen. Infrared spectra of BO, BO2, B2O2, B2O3, and BO2 in solid argon", <i>J. Chem. Phys.</i> , 95:12, pp. 8697-8709, December 15, 1991  SPURGIN, "Direct Conversion of the Random Thermal Energy of a Plasma Into

	<u> </u>		
Examiner		Date	
Signature		Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

Substitute	e for form 1449B/F	OF TO		Complete if Known		
Cabada	5 101 101111 14430/1			Application Number	09/225,687	
INI	FORMATI	ON DI	SCLOSURE	Filing Date	01/06/1999	
STATEMENT BY APPLICANT				First Named Inventor	Mills	
				Group Art Unit	1754	
(use as many sheets as necessary)				Examiner Name	Tsang	
Sheet	10	of	12	Attorney Docket Number	62-226-I	

	_	OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	r
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		D. Luggenholscher, U. Czarnetzki, and H.F. Dobele Institut fur Laser-und Plasmaphysik, Universitat Essen, Germany, "Investigations on Electric Field Distributions in a Microwave Discharge in Hydrogen"	
		Technology Insights, "Hydro Catalysis Technical Assessment," (Part of 09/009,837 paper no.: 20050207 This document was submitted by R. Mills on 7/17/02 in copending application 09/669,877).	
		Evans Analytical Group, <a href="http://www.cea.com/inst.htm#esca2">http://www.cea.com/inst.htm#esca2</a> , "Time-of-Flight Secondary Ion Mass Spectrometry "(TOF-SIMS)	
		J M Luque, M D Calzada and M Saez, "Experimental research into the influence of ion dynamics when measuring the electron density from the Stark broadening of the H∝and Hβ lines."	
		Eng-Kie Souw, "Plasma Density Measurement in an Imperfect Microwave Cavity", J. Appl. Phys. 61, 1761, 1987.	
		John R. Shook, "A Pragmatically Realistic Philosophy of Science", <a href="http://www.pragmatism.org/shook/pragmatic_and_Realistic.htm">http://www.pragmatism.org/shook/pragmatic_and_Realistic.htm</a>	
		Raoul Nakhmanson, "The Ghostly Solution of the Quantum Paradoxes and it's Experimental Verification", from "Frontiers of Fundamental Physics", Bartone & Selleri, Plenum Press, NY 1994, <a href="http://arxiv.org/ftp/physics/papers/0103/0103006.pdf/">http://arxiv.org/ftp/physics/papers/0103/0103006.pdf/</a>	
		Donald A. McQuarrie, "Quantum Chemistry", University Science Books, CA, 1983, relevant parts of Chapters 4, 6, and 8.	

Examiner	Date	
Signature	Considered	

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	<b>S</b> /_			PTO/SB/06B (Wodilied)			
Substitute	e for form 449B/PTO			Complete if Known			
				Application Number	09/225,687		
INI	FORMATION	l DI	SCLOSURE	Filing Date	01/06/1999		
ST	TATEMENT E	BY A	APPLICANT	First Named Inventor	Mills		
				Group Art Unit	1754		
(use as many sheets as necessary)				Examiner Name	Tsang		
Sheet	11	of	12	Attorney Docket Number	62-226-I		

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
	т	OTHER PRIOR ART — NON PATEINT LITERATURE DOCUMENTS	-
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
		E. Kovacevic, I. Stefanovic, J.Berndt, and J. Winter, "The Dynamic Response of the Plasma on the Dust Formation in Ar/C²H² Rf Discharges." <a href="http://www.rcpig.uni-greifswald.delproceedings/data/kovacevic-1">http://www.rcpig.uni-greifswald.delproceedings/data/kovacevic-1</a>	
		N. Cvetanovic, m.M. Kuraica, N. Konjevic, "Excessive Balmer Line Broadening in a Plane Cathode Abnormal Glow Discharge in Hydrogen", J. Appl. Phys. 97, 033302 (2005)	
	E. U. Condon, Ph. D., G. H. Shortley, Ph. D., "The Theory of Atomic Spectra.", Cambridge, 1967, pp.45-69, and 112-147.  Ben Best. "The Copenhagen Interpretation of Quantum Mechanics".		
		Ben Best, "The Copenhagen Interpretation of Quantum Mechanics", <a href="http://www.benbest.com/science/quantum.html">http://www.benbest.com/science/quantum.html</a>	
		Aaron J. Barth, "Bigger Than Fire?", SKEPTIC Vol. 8, No. 4, 2001.	
		Notes on David Peat, "Einstein's Moon: Bell's Theorem and the Curious Quest for Quantum Reality," History and Philosophy of Science-Fall, 1997-Dr. Ess, <a href="mailto:swww.drury.edu/ess/philsci/bell.html">swww.drury.edu/ess/philsci/bell.html</a>	
		"The Linear Stark Effect", University of Texas Lecture, <a href="http://farside.ph.utexas.edu/teaching/qm/perturbation/node8.html">http://farside.ph.utexas.edu/teaching/qm/perturbation/node8.html</a>	
		K.L. Ross, "Kantian Quantum Mechanics", <a href="http://www.fresian.com/space-2.htm">http://www.fresian.com/space-2.htm</a>	

Examiner	Date
Signature	Considered

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

	NY 8 TRACE				1 10/0B/00B (Modified)		
	e for form 1449B/PTO			Complete if Known			
				Application Number	09/225,687		
IN	FORMATION	DI	SCLOSURE	Filing Date	01/06/1999		
Sī	TATEMENT B	BY A	APPLICANT	First Named Inventor	Mills		
				Group Art Unit	1754		
	(use as many sheets as necessary)			Examiner Name	Tsang		
Sheet	12	of	12	Attorney Docket Number	62-226-I		

		OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Quantum Physics 301, Paradoxes and Interpretation", <a href="http://www.teachphy.brisac.uk/Level30100/CourseMaterials/paradoxes.pdf">http://www.teachphy.brisac.uk/Level30100/CourseMaterials/paradoxes.pdf</a>	
		The Internet Encyclopedia of Philosophy, "Logical Positivism", <a href="http://iep.utm.edu/logpos.htm">http://iep.utm.edu/logpos.htm</a>	
		H. G. Kuhn, F. R. S., "Atomic Spectra", Longmans, Green & Co., Ltd., London/Harlow 1969 (2 <sup>nd</sup> ed.).	
		Anthony J. Marchese, Ph. D., Peter Jansson, Ph. D., P.E., John I. Schmalzel, Ph. D., P.E., "The Blacklight Rocket Engine", NIAC Phase 1 Final Report (May 1-November 30, 2002). <a href="www.niac.usra.edu/files/studies/final_report/">www.niac.usra.edu/files/studies/final_report/</a>	
		"Average Molecular Kinetic Energy", <a href="http://hyperphysics.phy-astr.gsu.edu/hbase/kinetic/molke.html">http://hyperphysics.phy-astr.gsu.edu/hbase/kinetic/molke.html</a>	
		"Attempt to Observe Excess Heat in a Ni-H²O-K²CO³ Electrolysis System-9OCT97", www.earthtech.org/experiments/Mills/mills1.html.	
	"Attempt to Observe Excess Heat in a Ni-H²O-K²CO³ Electrolysis System-9OCT97", www.earthtech.org/experiments/Mills/mills1.html.  Eric Krieg, "Hydrinos: A State Below the Ground State" http://ww.freeenergies.org/bl/bwt/z/hydrino/hydrino.htm		
	_	Peter D. Zimmerman, "An Analysis of Theoretical Flaws in So-Called Classical Quantum Mechanics and of Experimental Evidence Against CQM" (2001)	
		Rathke "A Critical Analysis of the Hydrino Model", New Journal of Physics, 19 May 2005, http://www.iop.org/ej/article/1367-2630/7/1/127/njp5 1 127.html	
		Mills, R., "Physical Solutions of the Nature of the Atom, Photon, and Their Interactions to Form Excited and Predicted Hydrino States," (web publication June 9, 2004 at www.blacklightpower.com)	

Examiner	Date		-
Signature	Considered		

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.